U.S. COAST GUARD SANDY HOOK STATION,
WESTERN DOCKING STRUCTURE
West of the intersection of Canfield Road
and Hartshorne Drive
Highlands
Monmouth County
New Jersey

HAER No. NJ-79-A

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13-HIGH,
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTOIRC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

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HISTORIC AMERICAN ENGINEERING RECORD

U.S. COAST GUARD SANDY HOOK STATION, WESTERN DOCKING STRUCTURE

HAER No. NJ-79-A

Location:	West of the intersection of Canfield Road and Hartshorne Drive and South of U.S. Coast Guard Station on Sandy Hook Bay, Sandy Hook, Highlands, Monmouth County, New Jersey UTM: 18.583870.4479850 Quad: Sandy Hook, N.J.-N.Y., 1:24000
Date of Construction:	1896-1938-1952
Engineer: Architect:	Unknown Unknown
Present Owner:	U.S. Coast Guard
Present Use:	Boat dock, partially abandoned
Significance:	The Western Docking Structure is a functional component of the area used by the U.S. Coast Guard prior to and following WW II as a boat housing, boat launching, and maintenance facility primarily for rescue services. As such it represents contemporary technology to provide these services during the early and mid-20th century period of significance.
Project Information:	Due to deterioration and requirements for the docking of larger vessels, the structure has been scheduled for demolition and replacement. To mitigate the adverse effect, the State Historic Preservation Office stipulated documentation of the structure, including a narrative description and photography of character-defining features. This documentation was undertaken to fulfill these requirements.

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The Western Docking Structure is located on the southern side of the Sandy Hook barrier beach facing a protective embayment and shielded from a northwestern exposure by an attached timber breakwater. The structure is supported by a varied system of peeled whole log timber piers, sawn timber pier caps or plates, sawn wood floor joists and wood decking, much of which is deteriorated. A severely deteriorated sheet steel bulkhead protects the central portion of the structure on the harborside. From land, the structure is approached via a bituminous asphalt road located directly southwest of the circa 1975 U.S. Coast Guard Station Building.

The Western Docking Structure is a composite of two (2) timber wharfs and one (1) pier. A second pier has been recently demolished. Overall, the structure is continuously decked in varying sizes of wood planking and it has a superficial appearance as a single structural unit. The structure is, however, composed of distinct parts which retain individual framing design, decking configuration and are individually representative of specific uses and changes of use during the period of significance. For the purposes of this narrative, the structure is divided into four (4) descriptive components; Wharf A, Wharf B, Pier C and Pier D.

Wharf A

Located at the western end of the Western Docking Structure, Wharf A is composed of two sections, each of individual structural framing and surface decking. This area of the Western Docking Structure is rectangular, approximately 84.5 ft wide x 56 ft deep. The western end of Wharf A has been cut off (with a chain saw) by the prior demolition (in 1978) of the adjoining Ordnance Wharf. A wood plate and pier support system in line with the Ordnance Wharf is still extant along the cut edge. Along the harborside, Wharf A has a deteriorated sheet steel bulkhead front on which rests a narrow plank walkway connecting with the attached wood-planked breakwater extending to the south.

The western section of Wharf A (referred to on the Deck Character Plan as portion AA) is framed by five (5) rows of peeled whole log piers roughly 12" in diameter supporting 12 X 12" pier caps or plates running north and south. These plates are attached to the piers with single bolts and support 3 X 12" deck joists running east and west upon which are fastened 2.5 x 7" wood decking running in an north/south direction. There is evidence that burned pieces have been reused in the framing system. The fastenings are 7" square cut, galvanized spikes. Beneath this section of Wharf A is a timber groin buried in sand running north and south and continuing to the east in an elbow. Only the top of this structure is visible. It was constructed to stabilize sand movement under the wharf. The groin is built up of vertical planking with

mortised joints held in place by truncated log piers similar to those used for the wharf structure elsewhere.

Also beneath this section of Wharf A and to the east of the timber groin is the remains of a timber support system for an earlier structure, possibly the one track boathouse depicted in a 1943 Army Corps of Engineers location plan for the Mine Boathouse or possibly a dock structure shown in a 1918 plan for a proposed addition to the adjacent Ordnance Wharf prepared by the U.S. Army. This earlier support system consists of 6 pairs of 10-12" peeled whole log piers which decrease in vertical dimension in a series of steps toward the harbor. The east/west braces between the piers, which likewise step down toward the harbor, range north and south to support a sloped rectangular area approximately 5 ft wide and 25 ft long (running into the harbor). *Whether or not this structure dates to the earliest period of development of the western Docking Structure (circa 1896) is conjecture.*

The eastern portion of Wharf A has a distinct structural system differentiated from that of the western section. This system is characterized by 6 rows of peeled whole log 10" diameter piers supporting 12 X 12" sawn wood plates running in an east/west direction. Each row of piers and plates decreases in vertical dimension as the structure progresses toward the harbor. This step down configuration indicates that originally the system supported sloped decking appropriate for a boat launching facility. Such a facility is indicated in the 1943 Army Corps of Engineers location plan for the Mine Boathouse previously mentioned. Above this support system is, however, a relatively flat deck presumed to have been built between 1945 and 1958. This deck is built on an intermediary support system of vertical sawn wood braces and plates utilizing the earlier system as a base to create a level surface. The 2.5 X 7" decking runs north and south perpendicular to that of the northern section of the wharf. It is supported by regularly spaced 8 X 10" and 3 X 10" joists, the former providing structural support for a large 32 X 39' wood-framed, gable-roofed wharf building located on top of the decking. This building is no longer extant. A riveted and welded built up steel framework exists which was partially enclosed in the building. The building on the wharf, known recently as the Light Attendant Station (LAS) Building appears to have been destroyed by fire or removed after 1975. It contained a linoleum tiled kitchen and a toilet in the eastern portion of the structure. Evidence remains of these interior features on the dock, including remaining floor tiles and the flange for the toilet. Likewise there is evidence of quantity paint spills on remaining portions of the decking, substantiating the use of this building for painting, and maintenance. The lift structure was used originally for the hauling and repair of buoys.

The southern portion of Wharf A is protected by a deteriorated sheet steel bulkhead on the harborside. This bulkhead is attached to a pier and plate structural system separated from that of the wharf which supports a narrow deck walkway connecting to the adjacent timber breakwater.

Wharf B

Wharf B is adjacent to and located to the south of Wharf A. Originally constructed as a deck for a boathouse and a launchway, Wharf B is generally a 40' wide X 180' deep timber pier supported structure built over sandy beach into the harbor. The southern (harbor) portion of the structure slopes into the water remaining roughly 1.5' above mean high water at its outmost edge.

The structural support system for Wharf B consists of core area of cross-braced 10-12" single and paired piers ranging north and south toward the harbor. These piers decrease in vertical dimension approaching the harbor in a step down configuration appropriate for the support of decking that slopes into the water, similar to the original support system of eastern portion of Wharf A. Flanking the core set of cross-braced piers and likewise supporting 12 X 12" sawn-wood pier caps or plates is one row of peeled whole log piers under the western portion of the wharf. A similar set of piers extended on the eastern side of the core. These piers, however, have been removed to provide space for a ramp and floating dock which was recently constructed to replace a finger dock.

The decking on Wharf B is in three different configurations, indicating three periods of construction and/or reconstruction. The newest decking material is located in the eastern area recently altered for the construction of a floating dock. This area of the Wharf has been reconfigured for a ramp leading to the dock and the supporting system has been extensively refastened and/or rebuilt in this area. The next newest decking, perhaps 20-30 years old, remains over the southern portions of the wharf. The oldest section of decking remains over the northwestern portion. This area is generally inaccessible from beneath where sand has infilled to the deck joists. The 1943 Army Corps of Engineers Location Plan for the Mine Boathouse indicates that the southern or harbor side edge of the wharf has been cut down from its original size, including the configuration of the original finger piers which extended into the harbor from the deck. Historical photographs suggest this alteration may have occurred in 1976.

Wharf B appears to have been severely damaged by fire. Many piers retain burn and char marks. Some charred timber framing has been reused to support a relatively new decking on the eastern portion of the wharf. Likewise, further evidence of substantial

rebuilding is the use of galvanized bolts, washers and strap holders for the pier caps or plates. Most of the framing appears more recent than the supporting piers. The use of strap holders under Wharf B is a different fastening system than that used for Wharf A.

A 3-track boat house may have originally stood on Wharf B. Although there is no surviving physical evidence other than the paired pier support system that such a structure existed, the 1943 Army Corps of Engineers location plan for the Mine Boathouse shows a boathouse of this size on the wharf. Records in the collection of the Coast Guard Academy Library, New London, CT. indicate correspondence for 1938 boathouse and launchway plans. Historical photographic evidence suggests that by 1958 this boathouse had been remodeled removed. Physical evidence indicates that it may have been destroyed by fire along with substantial portions of decking. The wharf has also been cut down in size. It originally extended approximately 225 ft to flanking finger piers and it supported three launching tracks. Approximately 182 ft remain. The launching tracks have been removed with no physical evidence of their existence, indicting that the decking was rebuilt after removal of the tracks. Historical plans, maps and photographs indicate these alterations may have occurred after 1975 and before 1978.

Pier C

Pier C is a timber-framed dock extending approximately 156 ft into the harbor off the southwestern portion of Wharf B. It is supported by peeled whole log posts and sawn wood braces or plates which support the deck joists. Originally intended to provide docking for the boat launch facility on Wharf B, this pier or narrow dock has been partially rebuilt.

Pier D

Pier D has been removed and replaced with a floating dock and dock ramp system (indicated as Float No. 2 on the Basic features Map). Historical documentation, including historical photographs and plans indicate that it matched Pier C in the configuration of its structural system, dimensional characteristics and decking. Removal of Pier D occurred after 1988.

The Western Docking Structure retains significant design elements relating to its primary functional uses, although the structure has undergone extensive rebuilding and modification since its initial period of construction. The structure now retains the configuration and scale of major renovations undertaken in the late 1930s. These renovations principally are embodied in Wharf B and Piers C, and D.

Sections of the Western Docking Structure referred to as Wharf AA may have been built primarily as a lifeboat storage and launching facility for the U.S. Life-saving Service in an area designated for this function by the War Department in 1896. Historical plans indicate that a lifeboat house existed in this area in 1911.

The Sandy Hook facility was assigned a controversial heavy "English-type" lifeboat by 1886 and contemporary correspondence of the Station Keeper (T.H.Patterson), District office staff (C.H.McLellan), and the U.S. Life-saving Service Superintendent (Sumner I. Kimball) indicate that success with the use of this craft at Sandy Hook prompted the construction of a lifeboat house and launchway at the Western Docking Structure about 1896, remnants of which appear to remain beneath the present structure. The impetus to build a support structure for the English-type lifeboat in the vicinity of the existing government wharfs initiated a 100 year period of development for the Western Docking Structure. Prior to the use of the lifeboat, it appears that the Sandy Hook Station was primarily oriented to the Atlantic beach side of the Hook, operating surfboats from a station building located close to the beach coast. Experimental use of the lifeboat during the 1880-90 period may have prompted consideration for relocating the station house in closer proximity to the bay shore.

The Western Docking Structure evolved during the second stage of Sandy Hook Coast Guard facility development into the central waterfront activity center of the Sandy Hook Station. The second stage of development of the Sandy Hook Station includes changes in use of the facility from the years preceding World War I to the present, a period in which the U.S. Coast Guard was organized from the Revenue Cutter Service, the Life-saving Service, Lighthouse Service, the Steamboat Inspection Service, and the Bureau of Navigation. By 1917, the lifeboat house and launchway, in use adjacent to the Army's Ordnance Wharf, was in need of repair and was scheduled to be rebuilt reusing existing materials wherever appropriate. Although the station house once again was moved to a more suitable location away from Proving Ground activities in 1914, the boathouse and launchway were not moved to a new location. Between 1936-1838, with Works Progress Administration (WPA) funding, the 1890s station house was replaced with a larger Colonial Revival-styled facility nearby. This activity corresponds with multiple WPA improvements made to stations elsewhere where modernization of facilities or the building of new facilities was appropriate and the Colonial Revival style was used. Maps and plans indicate that the Western Docking Structure was overhauled at this time. Portions of the early lifeboat facility were reused for the construction of a 3-track boathouse and launchway and the conversion of the nearby 2 track and single track boathouses for use as machine shop and oil house. In 1938, a trapezoidal portion

of the nearby Army Ordnance Wharf was removed to allow for the construction of a sheet steel protective bulkhead, enclosing and protecting the boathouse and launchway from the northwest. An "mine boathouse and launchway" was built to the southeast by the Army about 1943, thereby containing the Coast Guard lifeboat facilities to a protected basin with the Western Docking Structure as its primary focus.

Subsequent alterations since World War II explain, in part, the present appearance and condition of the Western Docking Structure. By 1955, the 3 track boathouse was removed and the nearby 2-track boat house/machine shop rehabilitated for a buoy repair building. The latter structure was characterized by a fixed steel-framed 4 ton capacity hoist incorporated into the fabric of the building. The hoist frame is extant on the decking of the Western Docking Structure, the building itself having been destroyed by fire after 1975, and the 3 track launchway rails and decking extending into the water removed in 1976. Pier D, on the east side of the launchway facing Pier C was demolished and replaced with a floating dock in 1988, with portions of the decking adjoining this area replaced.

Significantly the adjacent mine boathouse and launchway, constructed during World War II, was made surplus by the Army following the War. Changes in program to larger motorized rescue craft and subsequent Coast Guard use of this facility, known as the Eastern Docking Structure, allowed for the reuse of the Western Docking Structure for functions other than lifeboat storage and launching. By 1962, the Buoy Repair Building on the Western Docking Structure was referred to as an Aid to Navigation Building. Ten years latter (1973) it was referred to as a Light Attendant Station (LAS) Building. In March 1973, the Engineer's Wharf and the Ordnance Wharf to the north of the Western Docking Structure were transferred to the Coast Guard. The Engineer's Wharf was removed in 1976 due to a very advanced state deterioration. After 1976 the Eastern Docking Structure was completely rebuilt with a travel lift /lifting well facility. In 1978 the Ordnance Wharf was removed exposing the northern end of the Western Docking Structure.

The chronology of change at the Western Docking Structure, ranging over the period of significance of the Fort Hancock and Sandy Hook Proving Ground Historic District, illustrates its extensive original use by the Life-saving Service and U.S. Coast Guard for lifeboat storage and launching functions, followed later by uses appropriate for a full service station such as buoy and navigational aid maintenance and repair. The extant structure retains features from the full range of its developmental history, although its primary contribution relates to its function as the Sandy Hook Station's lifeboat launching facility for nearly 100 years.

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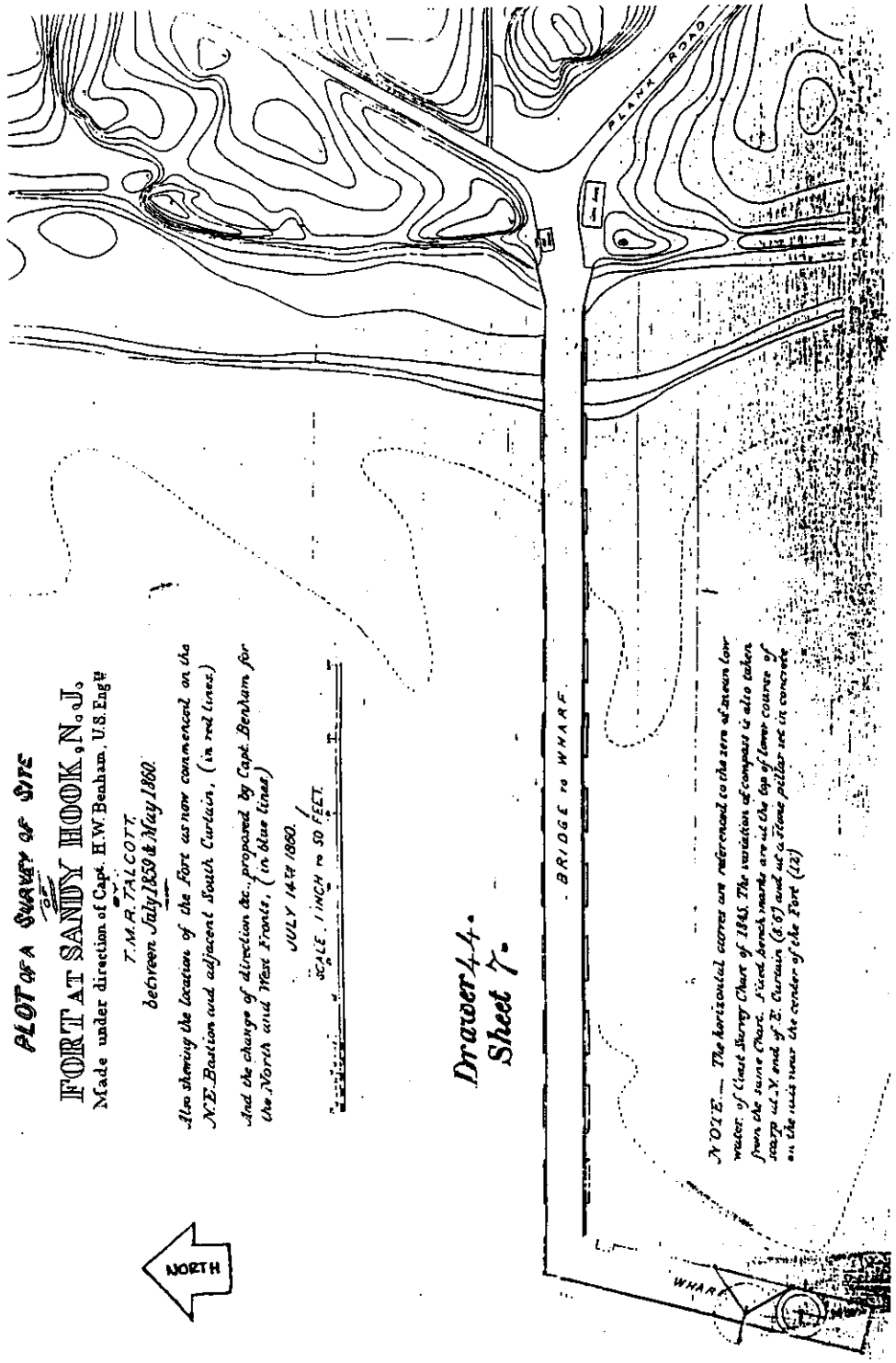

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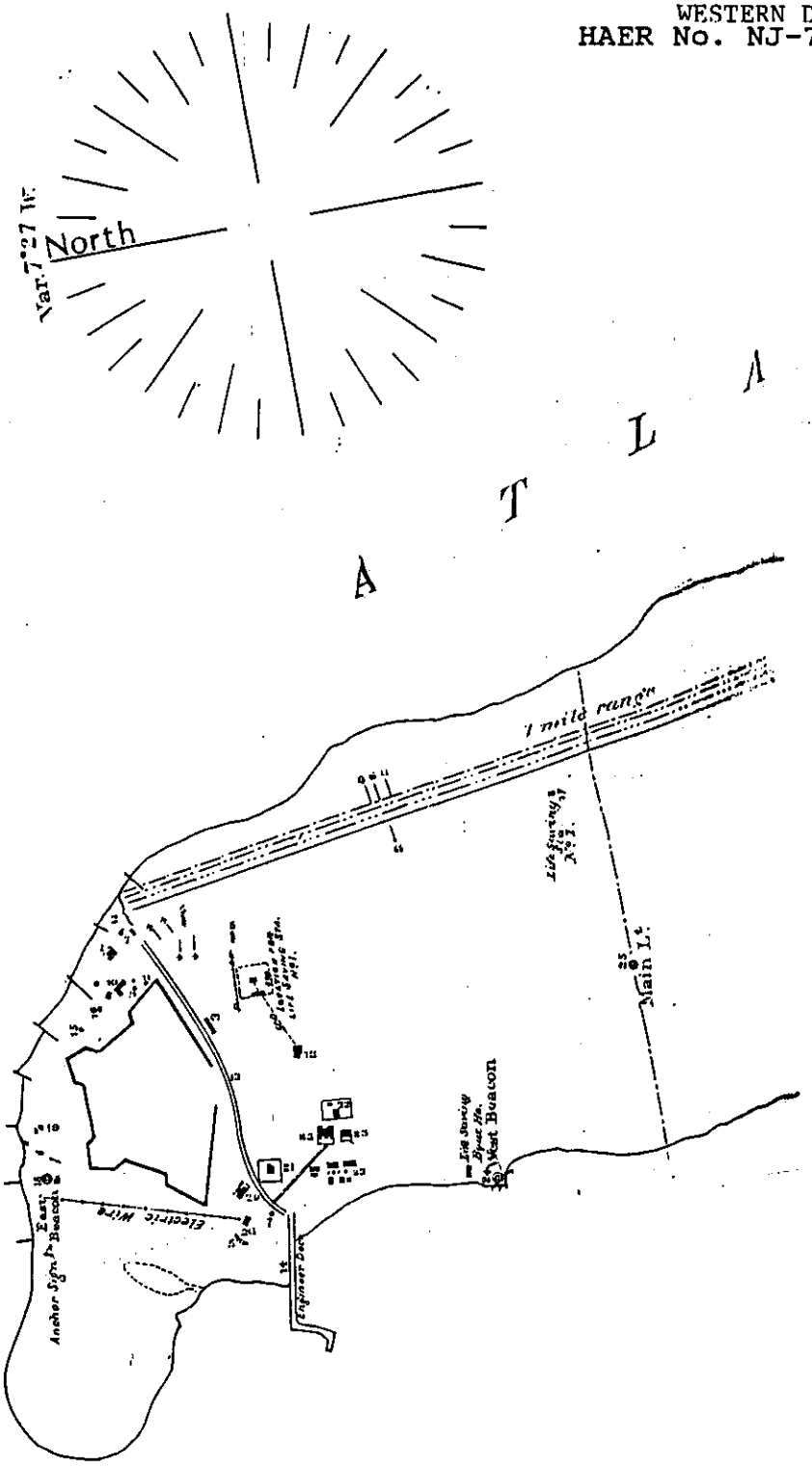

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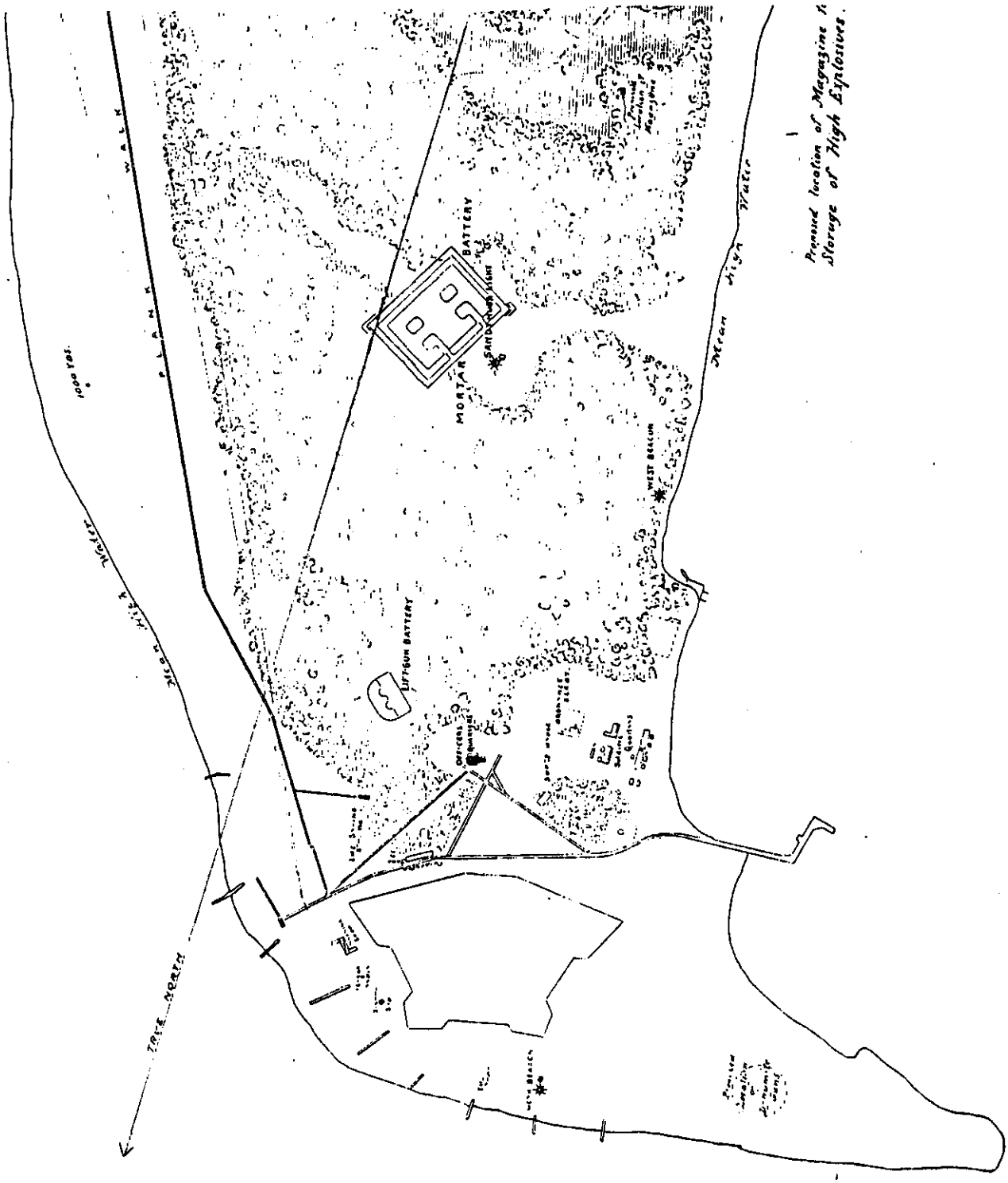

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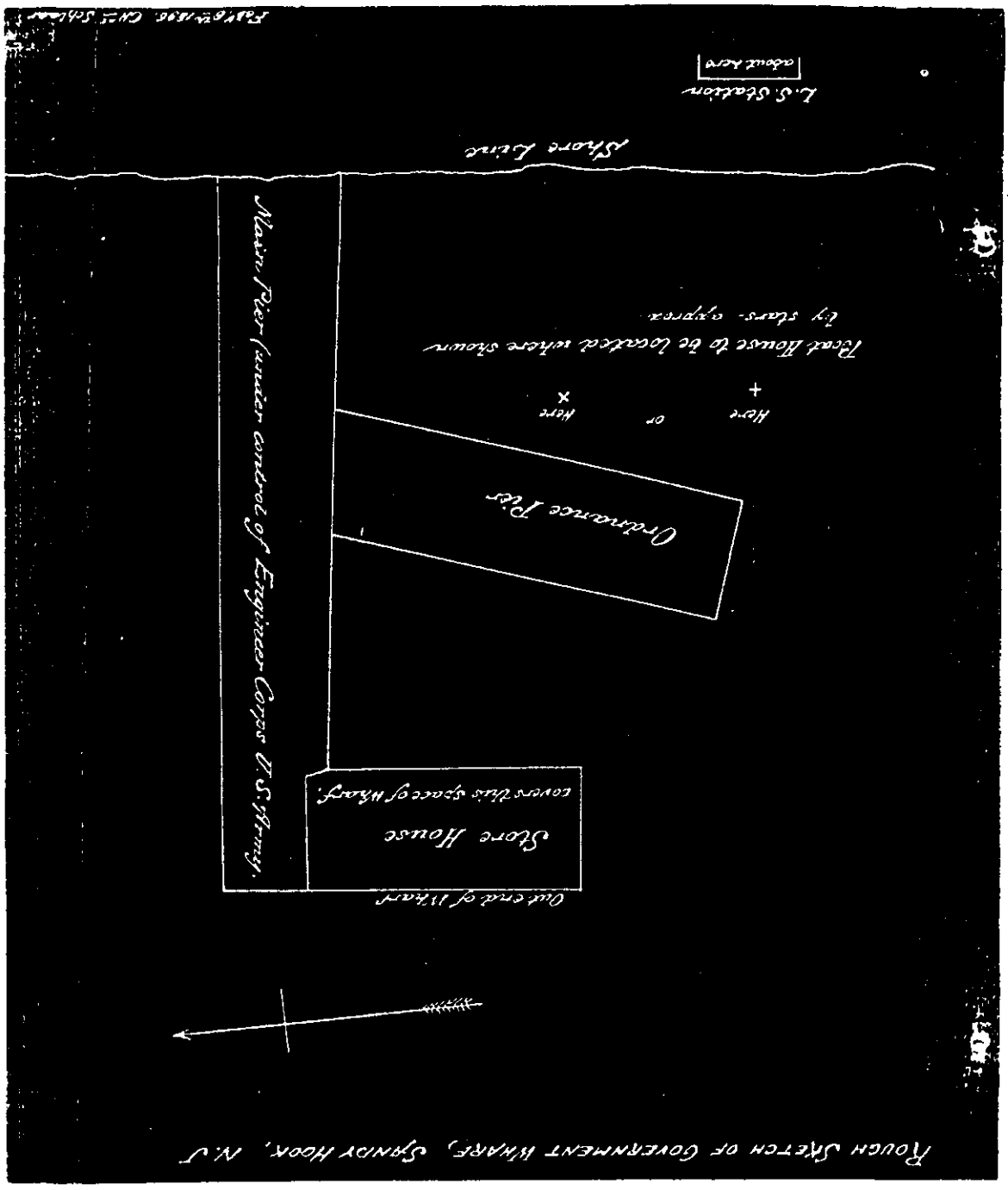

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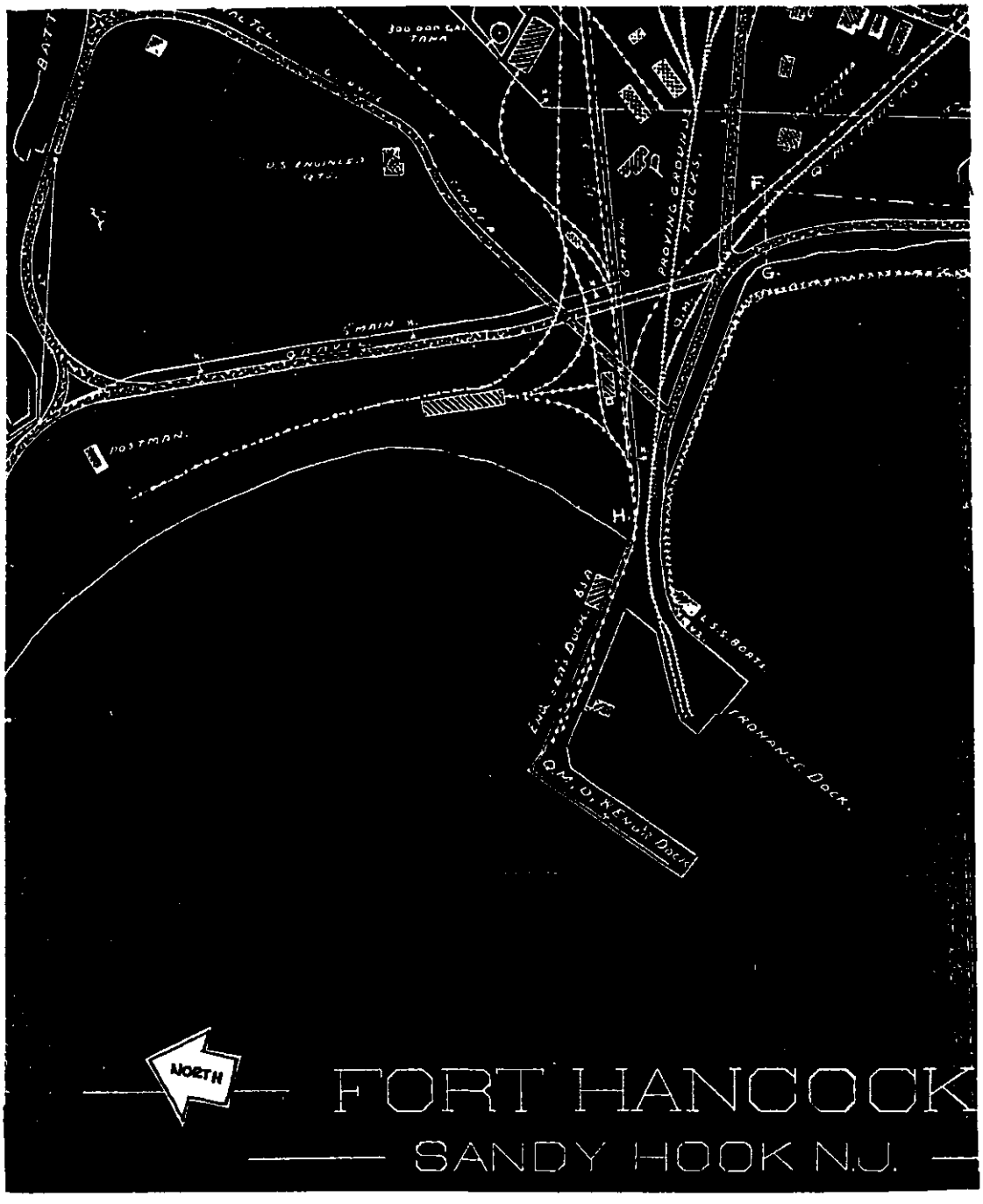

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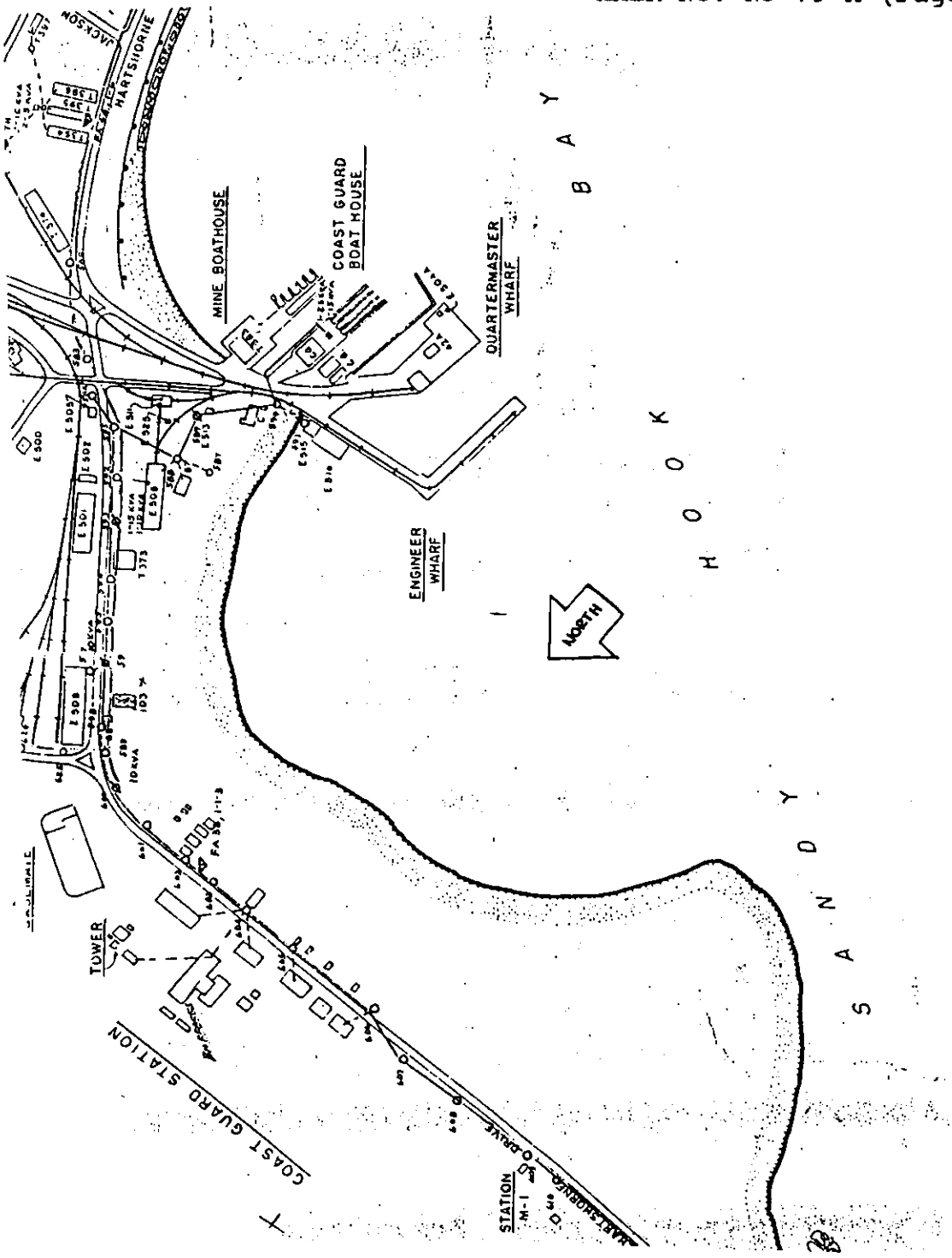

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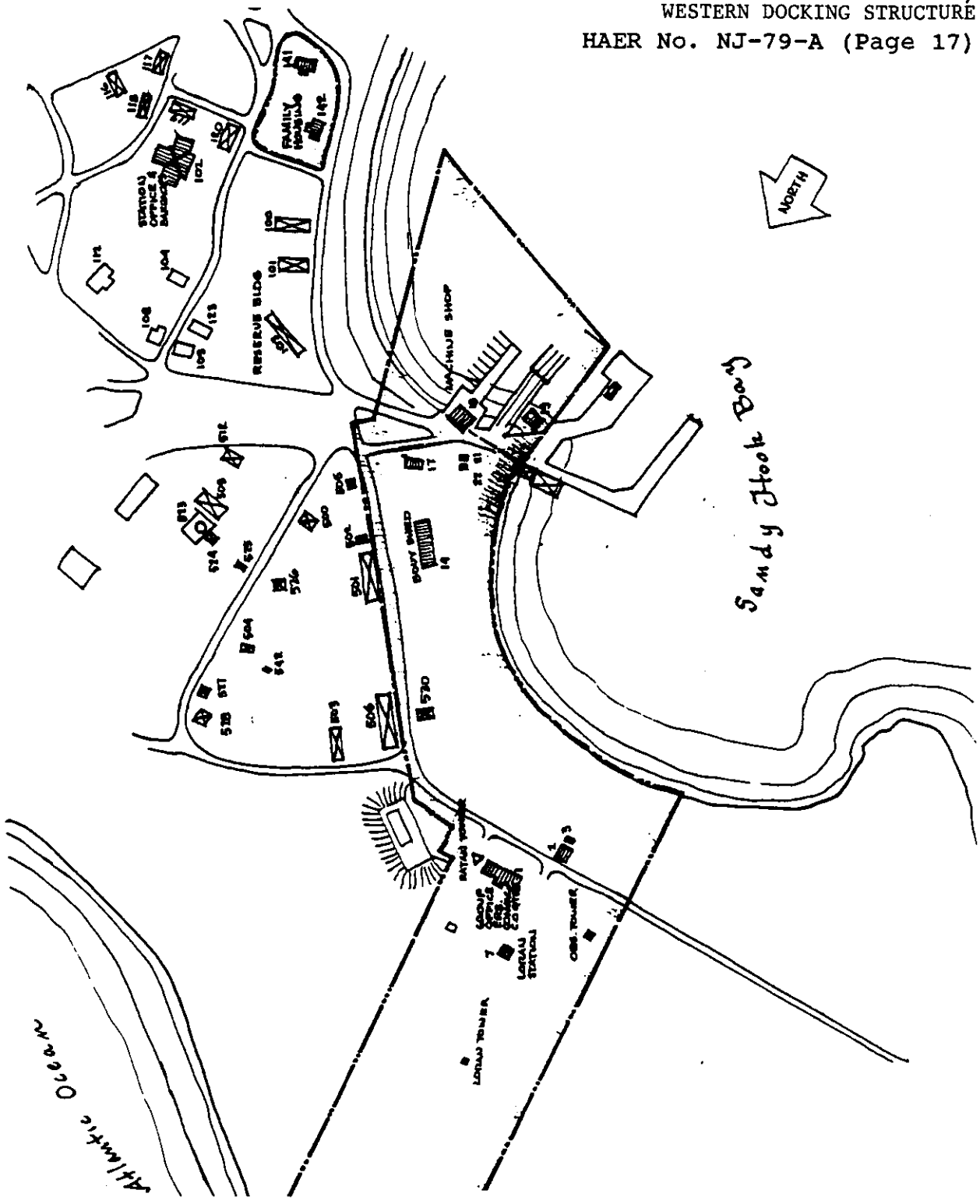

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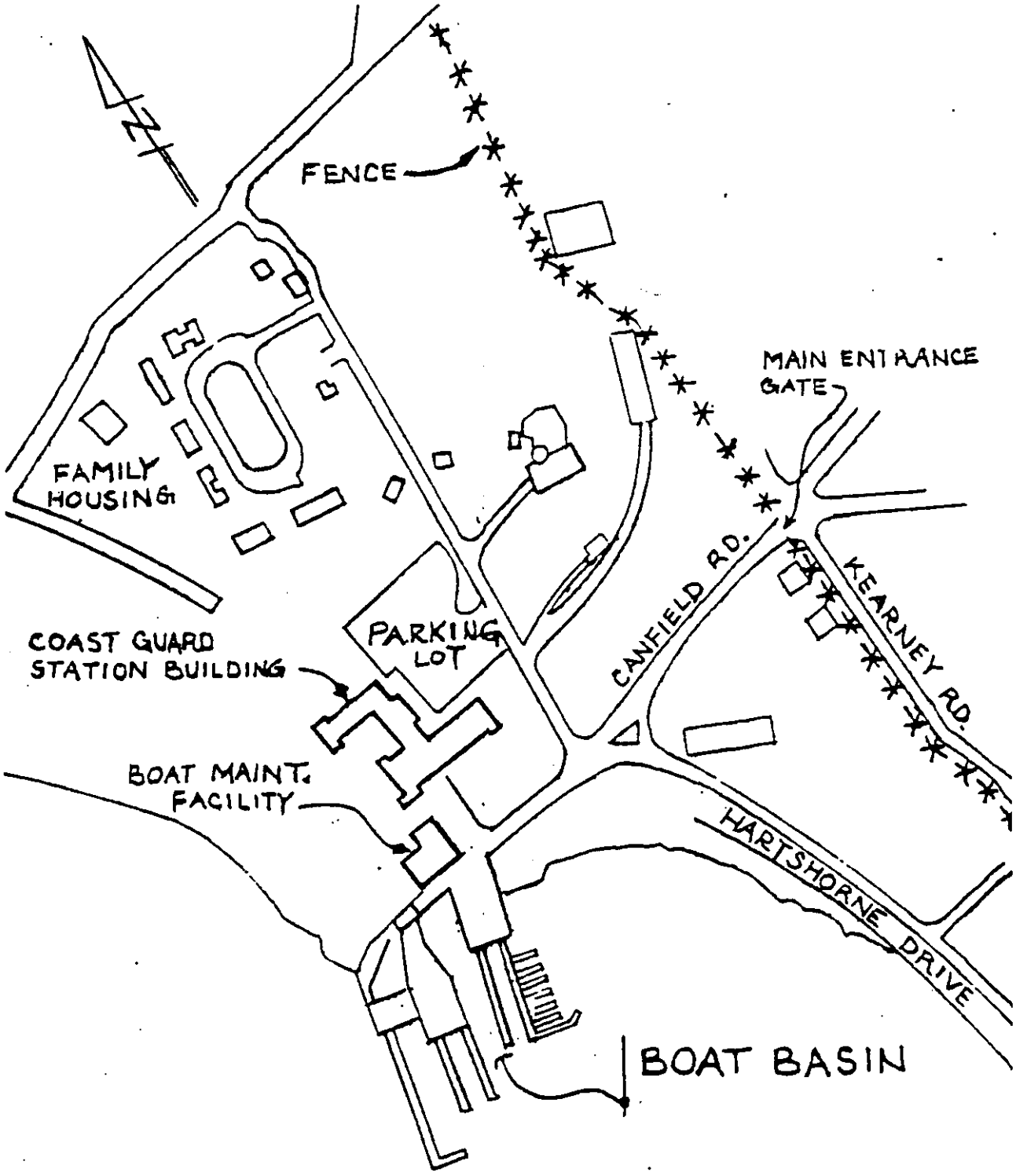

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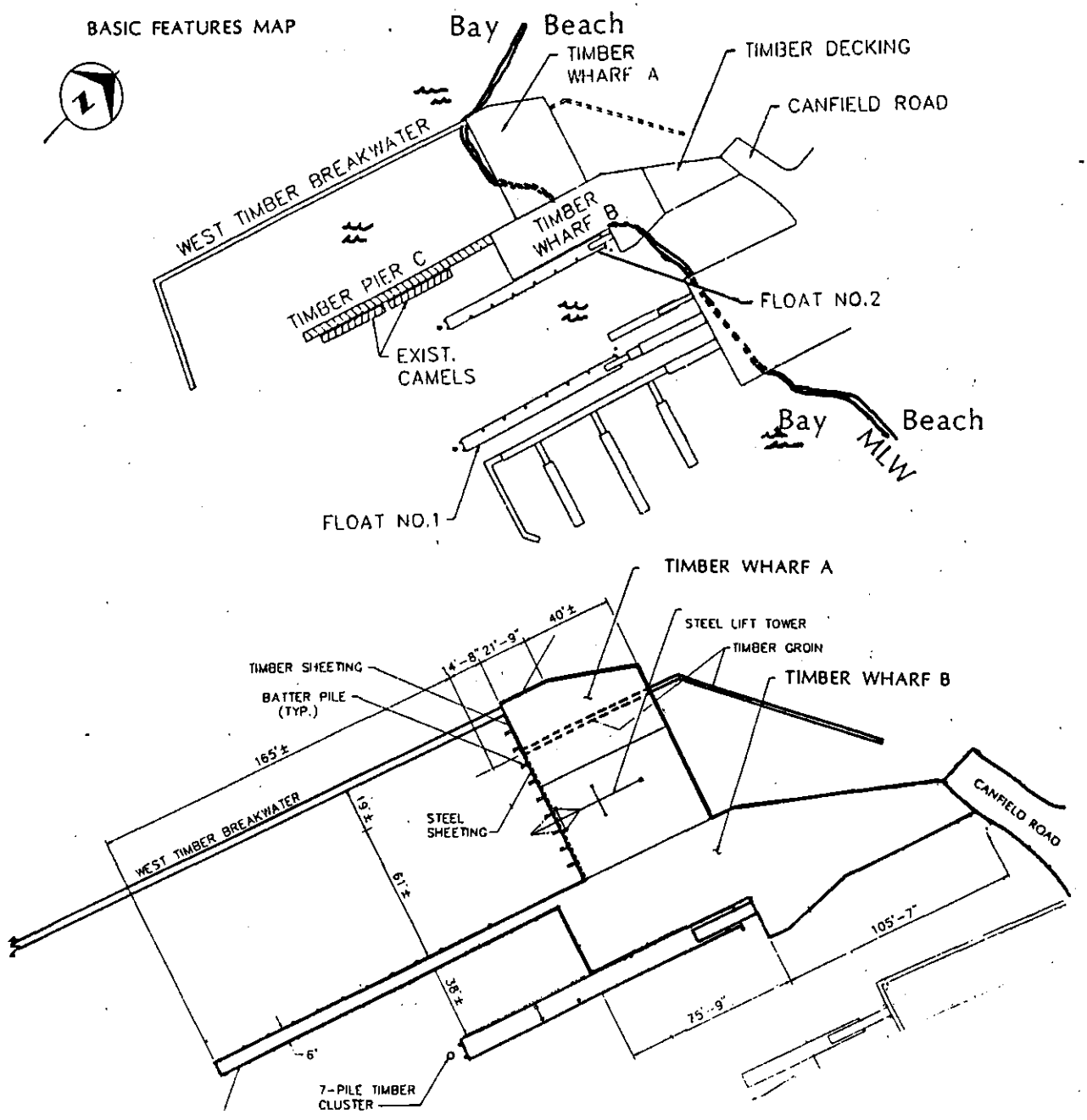

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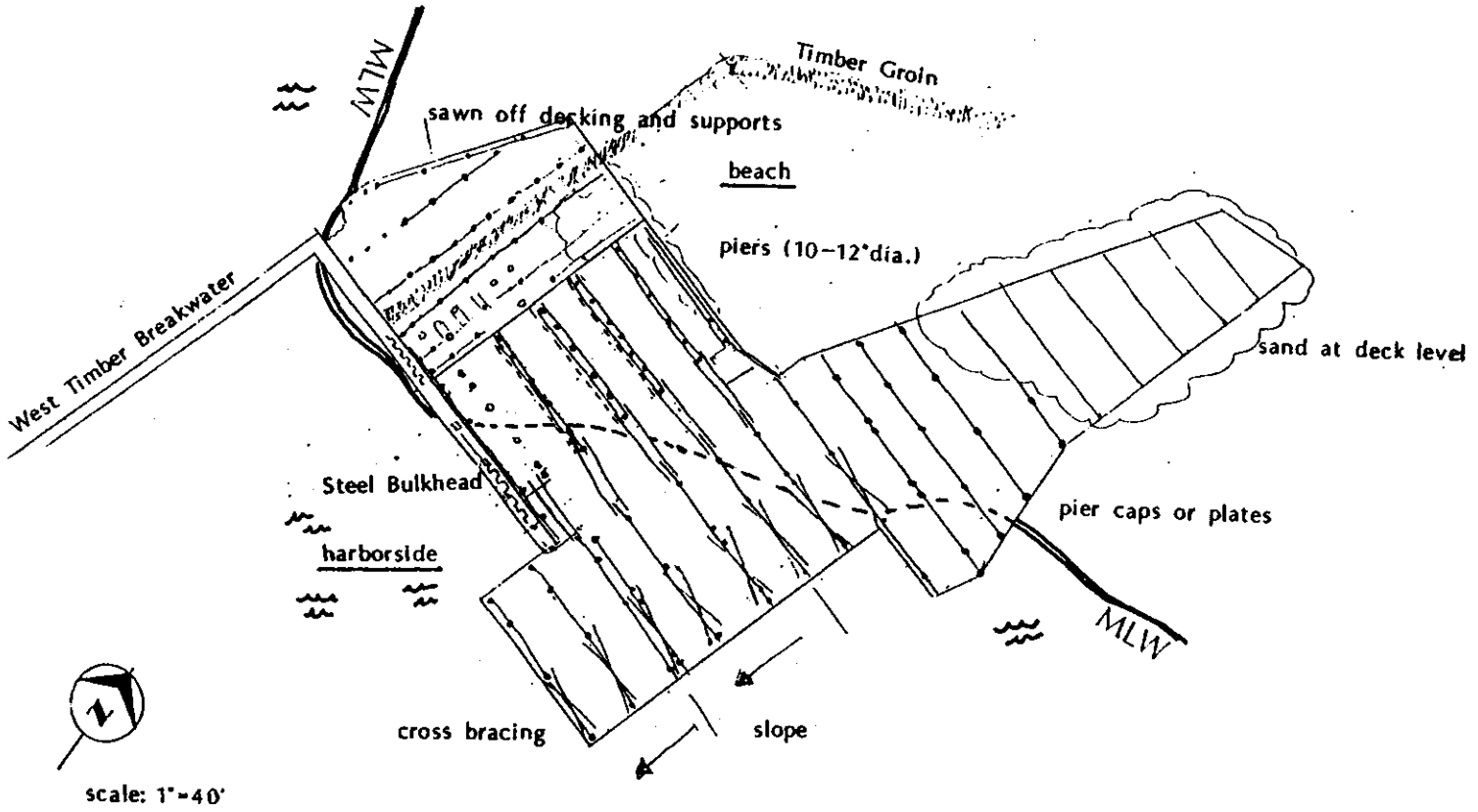

FRAMING PLAN

Source: Field investigation, The Newport Collaborative, Inc.
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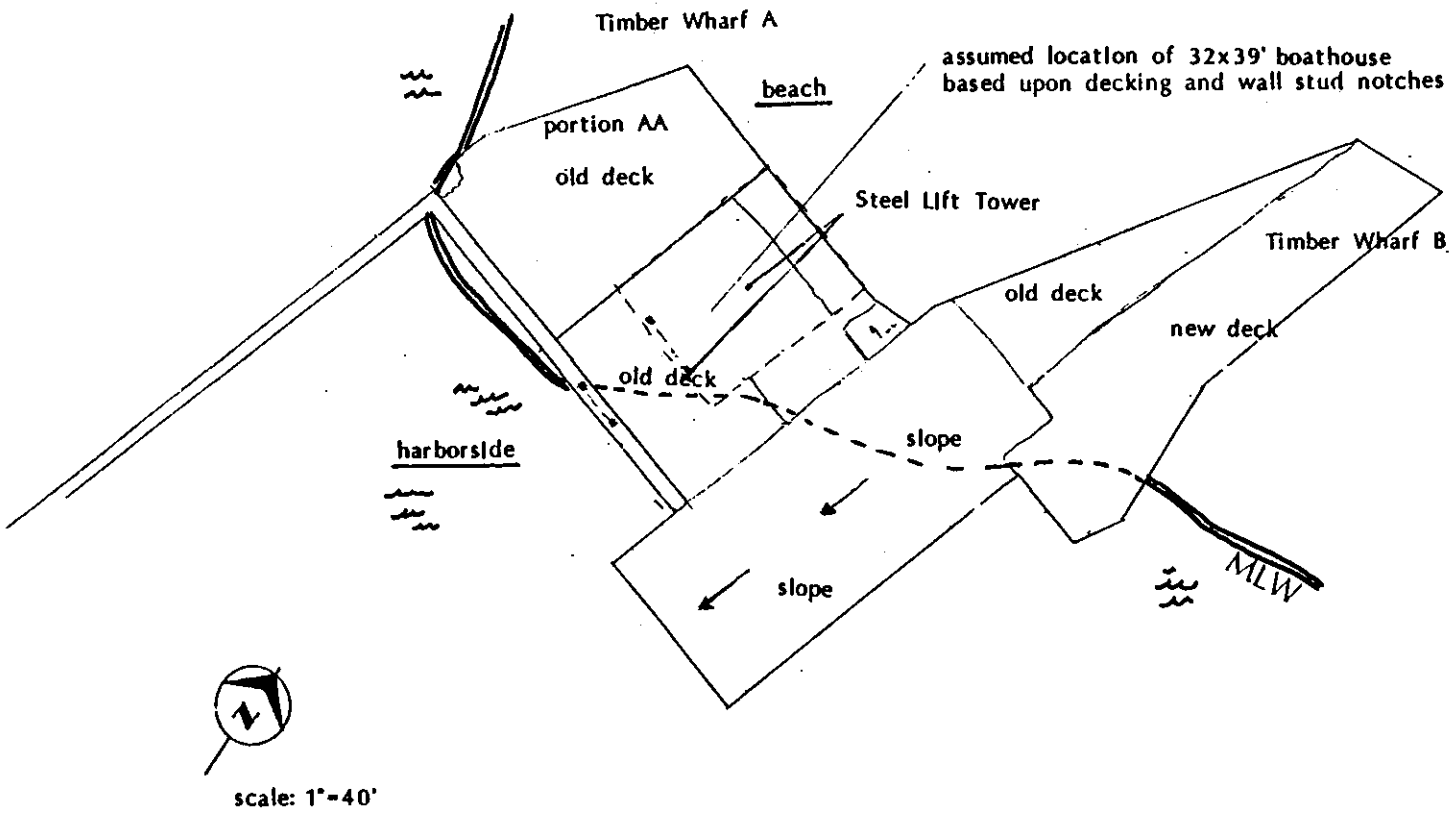

DECK CHARACTER PLAN

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